

AMENDMENTS TO THE CLAIMS

1-10. (Withdrawn)

11. (Currently amended) A method for producing a geogrid comprising:

(a) arranging a plurality of longitudinal fiber-reinforced polymer strips, each of which is configured so that a strip is reinforced with a fiber ~~a thermoplastic~~ in a thermoplastic polymer resin, in parallel;

(b) bending the plurality of longitudinal fiber-reinforced polymer strips to form ridges and valleys in turns so that the ridge and the valley formed in at least one of the longitudinal fiber-reinforced polymer strips are corresponding to the valley and the ridge formed in at least another one of the longitudinal fiber-reinforced polymer strips;

(c) inserting at least one lateral fiber-reinforced polymer strip, which is configured so that a strip is reinforced with a fiber in a thermoplastic polymer resin, through a space between the corresponding ridge (or, valley) and valley (or, ridge) of the longitudinal fiber-reinforced polymer strips in order to make the lateral fiber-reinforced polymer strip be crossed with the longitudinal fiber-reinforced polymer strips; and

(d) adhering the longitudinal and lateral fiber-reinforced polymer strips at contact points at which the longitudinal and lateral fiber-reinforced polymer strips are crossed,

wherein the fiber included in the longitudinal fiber-reinforced polymer strip and the fiber included in the lateral fiber-reinforced polymer strip are continuously extended in a length direction of each strip, and each strip is formed by surrounding the extended fiber with a polymer resin, and

wherein the longitudinal fiber-reinforced polymer strip and the lateral fiber-reinforced polymer strip are strips having experienced an extruding process but having not experienced a drawing process.

12. (Currently amended) A method for producing a geogrid comprising:

(a) bending a plurality of longitudinal fiber-reinforced polymer strips to form ridges and valleys in turns so that the ridge and the valley formed in at least one of the longitudinal fiber-reinforced polymer strips are corresponding to the valley and the ridge formed in at least another one of the longitudinal fiber-reinforced polymer strips;

(b) inserting at least one lateral fiber-reinforced polymer strip through a space between the corresponding ridge (or, valley) and valley (or, ridge) of the longitudinal fiber-reinforced polymer strips so as to form a first contact point at which a lower surface of the longitudinal fiber-reinforced polymer strip is crossed with an upper surface of the lateral fiber-reinforced polymer surface and a second contact point at which an upper surface of the longitudinal fiber-reinforced polymer strip is crossed with a lower surface of the lateral fiber-reinforced polymer strip; and

(c) adhering the longitudinal and lateral fiber-reinforced polymer strips to each other at the first and second contact points,

wherein the fiber included in the longitudinal fiber-reinforced polymer strip and the fiber included in the lateral fiber-reinforced polymer strip are continuously extended in a length direction of each strip, and each strip is formed by surrounding the extended fiber with a polymer resin, and

wherein the longitudinal fiber-reinforced polymer strip and the lateral fiber-reinforced polymer strip are strips having experienced an extruding process but having not experienced a drawing process.

13. (Currently amended) ~~A method~~ The method for producing a geogrid according to claim 12, wherein the first and second contact points are formed in turns in at least one of the longitudinal fiber-reinforced polymer strips.

14. (Currently amended) ~~A method~~ The method for producing a geogrid according to claim 12 or 13, wherein the at least one of the longitudinal fiber-reinforced polymer strips is a n^{th} strip, and the at least another one of the longitudinal fiber-reinforced polymer strips is a $n+1^{\text{th}}$ strip.

15. (Currently amended) ~~A method~~ The method for producing a geogrid according to claim 12, wherein at least two second contact points are formed between the first contact points in at least one of the longitudinal fiber-reinforced polymer strips.

16. (Currently amended) ~~A method~~ The method for producing a geogrid according to claim 12, wherein, in the step (c), the thermoplastic polymer resins of the longitudinal and lateral fiber-reinforced polymer strips are welded and fixed to each other at the first and second contact points.

17. (Currently amended) ~~A method~~ The method for producing a geogrid according to claim 16, wherein the first and second contact points are formed by vibration welding, ultrasonic friction welding, or heating adhesion.

18. (Currently amended) ~~A method~~ The method for producing a geogrid according to claim 17, wherein one of the longitudinal and lateral fiber-reinforced polymer strips positioned at the first or second contact points is fixed, while the other is vibrated so as to melt and adhere the thermoplastic polymer resins on opposite surfaces thereof.

19. (Currently amended) ~~A method~~ The method for producing a geogrid according to claim 12, wherein the first and second contact points are adhered step by step.

20. (Currently amended) A method for producing a geogrid with fiber-reinforced polymer strips, each of which is configured so that a strip is reinforced with a fiber in a thermoplastic polymer resin, by using a device including a strip arranging means, which has upper and lower plates for oppositely moving at an interval and first and second

bending members alternatively protruded on opposed surfaces of the upper and lower plates, the method comprising:

(a) supplying a plurality of longitudinal fiber-reinforced polymer strips in a row between the upper and lower plates along the first and second bending members;

(b) bending the longitudinal fiber-reinforced polymer strip by moving the upper and lower plates to approach to each other so that a portion of the longitudinal fiber-reinforced polymer strip pressed by the first bending member becomes a valley, while a portion of the longitudinal fiber-reinforced polymer strip pressed by the second bending member becomes a ridge;

(c) inserting a lateral fiber-reinforced polymer strip through the corresponding ridge (or, valley) and valley (or, ridge) of the plurality of longitudinal fiber-reinforced polymer strips so that the lateral fiber-reinforced polymer strip is crossed with the longitudinal fiber-reinforced polymer strips; and

(d) adhering contact points at which the longitudinal and lateral fiber-reinforced polymer strips are crossed to each other,

wherein the fiber included in the longitudinal fiber-reinforced polymer strip and the fiber included in the lateral fiber-reinforced polymer strip are continuously extended in a length direction of each strip, and each strip is formed by surrounding the extended fiber with a polymer resin, and

wherein the longitudinal fiber-reinforced polymer strip and the lateral fiber-reinforced polymer strip are strips having experienced an extruding process but having not experienced a drawing process.

21. (Currently amended) ~~A method~~ The method for producing a geogrid according to claim 20, wherein support grooves are formed on the first and second bending members along the longitudinal fiber-reinforced polymer strips so that the longitudinal fiber-reinforced polymer strips are not deviated when being pressed.

22. (Currently amended) ~~A method~~ The method for producing a geogrid according to claim 20, wherein through holes are formed in the first and second bending members respectively so that the lateral fiber-reinforced polymer strip is inserted to pass through.

23. (Currently amended) ~~A method~~ The method for producing a geogrid according to claim 20, wherein, in the step (d), the contact points are adhered by means of a welding unit which includes: upper and lower jigs which oppositely moves at an interval; and a plurality of support holders protruded on opposite surfaces of the upper and lower jigs so as to be opposed with each other.

24. (Currently amended) ~~A method~~ The method for producing a geogrid according to claim 23, wherein one of the longitudinal and lateral polymer strips crossed at the contact point is pressed and supported by one of the opposite support holders, and wherein the other of the longitudinal and lateral polymer strips crossed at the contact point is pressed and vibrated by the other of the opposite support holders so that the contact point is adhered.

25. (Currently amended) ~~A method~~ The method for producing a geogrid according to claim 24, wherein, in the step (c), a first contact point at which a lower surface of the longitudinal fiber-reinforced polymer strip is crossed with an upper surface of the lateral fiber-reinforced polymer strip and a second contact point at which an upper surface of the longitudinal fiber-reinforced polymer strip is crossed with a lower surface of the lateral fiber-reinforced polymer strip are formed, and wherein the first and second contact points are adhered step by step with the use of the welding unit.